

SCHWARZ, Stefan; KLIMEK, Rudolf; MADEJ, Jan; MATUSZEWSKI, Henryk;
OSUCHOWSKI, Jerzy; SOLARZ, Edward

Oxytocin analogues in obstetrics and gynecology. Ginek. pol.
34 no.4:487-490 '63.

1. Z I Kliniki Polonictwa i Chorob Kobiecych AM w Krakowie
Kierownik Kliniki: prof. dr med. S. Schwarz.

KLIMEK, Rudolf; KORDEUSZ, Zygmunt

Cyclopeptide hormones and contraction of the uterine vessels.
Ginek, pol. 34 no, 4:491-495 '63,

1, Z I Kliniki Polonictwa i Chorob Kobiecych AM w Krakowie
Kierownik: prof. dr med. S. Schwarz.

(ABORTIONS, LEGAL) (OXYTOCINS)
(UTERUS) (VASOMOTOR SYSTEM)

BALASH, A. [Balasz, A.]; KLIMEK, R.

Oxytocin dynamic test for the determination of the time of delivery. Akush. i gin. 39 no.3:99-101 My-Je'63 (MIR 17:2)

1. Iz 1-y kliniki akusherstva i ginekologii (zav. - prof. dr. S. Shvarts) Meditsinskoy akademii, Krakov.

OSZACKI, Jan; GROCHOWSKI, Jan; KLEINEK, Rudolf

Oxytocin in mechanical jaundice. Pol. przegl. chir. 35
no.7/81742-743 '63.

l. z II Kliniki Chirurgicznej AM w Krakowie Kierownik: prof.
dr J. Oszacki i z I Kliniki Położnictwa i Chorób Kobiecych
Kierownik: prof. dr S. Schwarz.
(JAUNDICE, OBSTRUCTIVE) (OXYTOCIN)
(BILE)

SCHWARZ, Stefan; ZAMELLO, Jerzy; KLIMEK, Rudolf; MARCZYNSKI, Kazimierz;
MATECKI, Tadeusz; MILEWICZ, Stanislaw; SOLARZ, Edward

Statistical analysis of the surgical material of the 1st Obstetrical and Gynecological Clinic of the Academy of Medicine in Krakow during the period 1950-1961. Ginek. pol. 35 no.1:51-53
Ja-P'64

1. Z I Kliniki Polonistycznej i Chorob Kobiecych AM w Krakowie;
kierownik: prof.dr.med. S.Schwarza.

*

KLEINER, Rudolf; MAŁUSZIŃSKI, Henryk; TĘBERKI, Zbigniew

Remote puerperal endocrinological disorders. Ginek. vol. 35 no.2:
251-256. Wr-Ap '64.

1. Z I Kliniki Położnictwa i Chorób Kobiecych Akademii Medycznej
w Krakowie (Kierownik: prof. dr. med. S. Schwarz).

KLDIEK, Rudolf; PARADYSZ, Aleksandra

Water test in the diagnosis of endocrine diseases. Pol. M.G.
Lek. 20 no.8:259-262 22 Feb.

1. Z I Kliniki Polowizjana i Chorob Kolejnych Akademii Medycznej
w Krakowie (kierownik Kliniki prof. dr. med. Stefan Szwarc).

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMEK, Rudolf

Pregnancy and labor in the light of studies on the oxytocin-oxytocinase system. Folia med. Cracov. 6 no.4:471-489 '62.

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

KLINEK, S.

Koszarski, L. Comparing the stratigraphic geography of Debnik with the Devonian of neighboring regions. p. 389.
PRZEHŁAD GEOLOGICZNY, Warszawa, No. 8, Aug. 1955.

SC: Monthly list of East European Accessions, (YAML), 15, Vol. 4, no. 10, Oct. 1955,
Uncl.

Klimek, S.

604.023.4 : 034.073.1 : 003.43 : 031.228.5
Klimek S., Miecz W., Holman W. Vaults of 8 cm Thick Precast Cor-
rugated Reinforced Concrete Slabs.
"Skladanie z prefabrykowanych betonowych płyt falistych grubo-
ści 8 cm". Inżynieria i Budownictwo, No. 6, 1952, pp. 189-191, 30
figs, 1 tab.

The paper describes an investigation carried out during 1953-54
on roof coverings of folded and corrugated slabs and also the first vault
constructed from these precast corrugated reinforced concrete slabs.
Tables are included listing the sizes and weights of the slabs, and the
amounts of material used per 1 m² of horizontal projection for various
column arrangements. At the authors' opinion, among the advantages
of the vaults here described are 1) low expenditure of the more im-
portant building materials, and 2) great simplicity of the design of the
corrugated slabs and vaults. At the same time, the precast units are
easy to produce and easy to mount, and the vaults so constructed are
elegant in appearance both from within and without.

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"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

Klimmer, S.

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

KLIMEK, Slawomir (Warszawa)

Evaluation of completed multistory industrial buildings constructed
with post-tensioned prestressed concrete. Przeegl budowl i bud
mieszk 34 no.2:81-86 F '62.

MARKOWA, Janina; MAREK, Alfred; SKROCHOWSKA, Maria; KLIMEK, Stanislaw

Studies on the presence of the Western equine encephalitis virus
in the blood in experimental viral diseases of the bone. Chir.
narzad. ruchu ortop. Pol. 29 no.2:265-268 '64.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Krakowie
(Kierownik: prof. dr. J. Ozacki), z III Kliniki Chirurgicznej
Akademii Medycznej w Krakowie (Kierownik: prof. dr. J. Jasieniak)
i z Wytworni Surowic i Szczepionek w Krakowie (Dyrektor: dr. Z.
Mosczeniak).

KLIMEK, Teresa, ins.

A review of the hydrological and meteorological phenomena in August
1961. Gosp vodna 21 no.11: 499 N '61.

1. Zaklad Prognoz Hydrologicznych, Państwowy Instytut Hydrologiczno-
Meteorologiczny, Warszawa.

KLIMEK, Teresa, ins.

A review of the hydrological and meteorological phenomena in September 1961. Gosp vodna 21 no.12:536 D '61.

1. Zaklad Prognoz Hydrologicznych, Państwowy Instytut Hydrologiczno-Meteorologiczny, Warszawa.

KLIMEK, Teresa, ins.

Review of hydrometeorological phenomena in October 1961, Gosp vodna
22 no. 1:34 '62,

1. Zaklad Prognoz Hydrologicznych Państwowego Instytutu Hydrologiczno-
Meteologicznego.

KLIMEK, V.

Fundamental theoretical formulas for operating steam engines. p. 1461. Vol. 9, No. 9, 1954. TEHNIKA.
Beograd, Yugoslavia.

SOURCE: East European Accessions List, (EEL) Library
of Congress, Vol. 5, No. 8, August, 1956.

KLIMEK, V.

Principles for calculating and determining coal consumption by
steam locomotives. p. 6

ZELEZNICE. (Zeleznicki institut GDJZ) Beograd.

Vol. 12, no. 7, July 1956

SOURCE: East European List (ERAL) Library of
Congress, Vol. 6, No.1, January 1957

KLD-KK, Walter; LEMBRYCH, Stanislaw

Early changes in the urinary system after Wertheim's operation.
Gin. polaka 32 no. 3:329-335 '61.

1. Z Wojewódzkiego Szpitala Specjalistycznego Ginekologiczno-
Pelanicznego w Opolu Dyrektor: dr med. S. Messer
(HYSTERECTOMY compl)
(UROLOGY)

KLIMINCHIKO, D.V. (Klimel' nitskaya obl. USSR)

Making up problems in the club. Mat.v shkole no.3:58-59 My-Je '56.
(KLA 9:8)

(Mathematics--Problems, exercises, etc.)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIM ENCHENKO, D.V.

KLIMENCHENKO, D.V. (Osipenko)

Checking and grading the knowledge of students. Mat.v shkole
no.6:55-56 N-D '57. (MIRA 10:11)
(Mathematics--Study and teaching)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

BEKAREVICH, A.N. (Gomel'); BERESLAVSKIY, M.D. (Uzhgorod); GROMOV, A.P. (Melekesse);
DUBINCHUK, Ye.S.; TESLENKO, I.F. (Kiev); ZOLOTOVITSKIY, Ye.I. (Kantovo);
KAZHDAN, B.I. (Leningrad); KLIMENCHIK, D.V. (Berdyanek); MEL'NIKOV,
K.S. (Sterlitamak); MIKHAYLOV, K.Y. (Magnitogorsk); NASTROV, A.Z. (Sterl-
itamak); NEFEDOV, D.I. (Moskva); NOVOSELOV, S.I. (Moskva); PRAVILOV, B.N.
(s. Kanino Ryazanskoy obl.); PRINTSEV, N.A. (Kursk); SEMENOVICH, A.Y.
(Sverdlovsk)

Discussion of the plans for the programs. Mat. v shkole no.6:5-28
(MIRA 13:3)
MID '59.
(Mathematics--Study and teaching)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENCHENKO, D.V. (Berdiansk)

Rational procedure for solving problems in mathematic lessons.
Mat. v shkole .n.1:63-64 Ja-F '60. (MIRA 13:5)
Mathematics—Study and teaching)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

KLIMENCHENKO, D.V. (Berdiansk)

Interconnection between the courses of arithmetics and algebra.
Mat. v shkole no. 4147-49 Jl-Ag '62.
(Mathematics--Study and teaching) (MIRA 15:11)

BUGOV, A.U., inzh.; KLIMENCHENKO, T.V., inzh.; DMITRIYEV, L.A., inzh.

Expedient design of annular connecting flanges for hydraulic
turbine rotors and standardization of their calculation.
Energomashinostroenie 9 no.5:6-10 My '63. (MIRA 16:7)

(Hydraulic turbines) (Flanges)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENCHUK, A.N.

Belt-drum machine for grinding curvilinear surfaces of bars with
shaped cross section. Bum. 1 der. prem. no. 3140-41 J1-S '65.
(MIRA 18:9)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KUNIN, Z.A.; KLYMENCHUK, A.V.

Attachment to rotary veneer cutters for buttling out veneer.
Bum. 1 der. prom. no. 2130-31 Ap.-Je '65. (MEPA 18:6)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENCHUK, A.V.

Belt-drum machine for grinding curvilinear surfaces. Der.
(MIRA 18:12)
prom. 14 no.10:24-25 0 '65.

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

YEREMENKO, G.X.; VAL'TER, A.A.; KLIUCHUK, V.I.

Distribution of gallium in alkali rocks as revealed by the study
in the region of the Sea of Azov. Geokhimiia no.2:132-136 P '63.
(MIRA 16:9)

1. Institute of Mineral Resources, Academy of Sciences, Ukrainianian
S.S.R., Simferopol.

VASILEVSKAYA, A.Ye.; SHCHERBAKOV, V.P.; KLIMENCHUK, V.P.

Determination of mercury in coals by dithizone. Zav.lab.
28 no.4:415 '62. (MIRA 15:5)

1. Institut mineral'nykh resursov AN USSR.
(Mercury—Analysis) (Dithizone)
(Coal—Analysis)

KLD. MIK, C. S.

③ 3
1958⁴ (Influence of Molecular Interaction on Light Diffusion Properties of Rubber Solutions.) Vliessie mechanika
molekulyarnykh interaktsii na svetovoschelnost' rastvorov kaučuka.
V. V. Orl' and G. A. Ulyanov. Kolloidnyi Zhurnal, v. 16, no. 3,
May-June 1954, pp. 44-46.
Method for determining specific cohesion energy. Tables, dia-
gram, graphs. 7 ref.

KLIMENTO, A.

Amateur nature of work in the trade-union club, Sov.profsoiuz
4 no.11:62-66 N '56.
(MIRA 10:1)

1. Predsedatel' pravleniya kluba Dneprodzerzhinskogo cementnogo
zavoda.
(Dneprodzerzhinsk--Community centers)

ILIMKHO, A.

To what does this lead. Avt. transp. 36 no. 9:47 8 '58. (MIRA 11:10)
(Drinking and traffic accidents)

KLIMENKO, A.; PRIGOZHIN, N.

Continuous industrial crews and business accounting in coal mines.
gots. trud no.4:113-117 Ap '57. (MLRA 10:6)

1. Upravlyayushchiy trestom "Kospashugol" (for Klimenko). 2. Nachal'nik shakhty no.39/40 (for Prigoshin).
(Coal mines and mining)

KLIMENKO, A., polkovnik; SHUBIN, A., podpolkovnik

How we organized and conducted refresher training courses. Tyl 1
snab.Sov.Voor.Sil 21 no.3:13-18 Mr '61. (MIA 14:6)
(Military education)

KLIMENKO, A.

Cultivation of rice in the U.S.A. Zemledelie 27
no.3:91-94 Mr '65. (MIRA 19:1)

KLIMENTKO, A.A. (st. Bataysk)

Operating technical inspection points according to Comrade
Shcheklikin's method. Zhel.dor.transp. 37 no.12:79 D '55.
(MLRA 9:5)

1. Nachal'nik vagonnogo uchastka.
(Railroads--Repair shops)

KLIMENKO, A.A.

UGSR/Human and Animal Physiology - (Normal and Pathological).
Blood. General Problems.

Abs Jour : Ref Zhur Biol., No 4, 1959, 17259

Author : Sergel', O.S., Klimenko, A.A.

Inst :

Title : Luminiscent Method of Investigation of Blood and Bone Marrow in Radiation Sickness.

Orig Pub : Vestn. rentgenol. i radiol., 1957,³² No 5, 76-81

Abstract : The method is based on the ability of the nuclei of blood cells which contain DNA and have been treated with acridine orange to glow under normal conditions with a green light, and on the ability of protoplasm which contain RNA to glow with a pale green or orange glow. Erythrocytes (E) are not luminiscent; therefore the background of the specimen is dark. After a single general irradiation of 25 rabbits with a dose of 800 or 1200 r and of 8 dogs with 500 r, after 30-60 min was observed a single

Card 1/3 Radiological Dept, State Sci Res Inst. Roentgenology and Radiology.

APPROVED FOR RELEASE: 09/18/2001 and Pathological).
Blood. General Problems.

Abs Jour : Ref Zhur Biol., No 4, 1959, 17259

bright green or bright red foci of necrosis in the bone marrow (BM). Simultaneously, cells in the form of diffuse luminous orange or red balls appeared with a disrupted nuclear chemism, which assumed red luminiscence. In the blood, in the course of 1-3 days after irradiation, green luminiscence of plasma and brick-red luminiscence of E, and an increase of the % of red blood cells were discovered. At the peak of radiation sickness, in the specimens of BM and blood the plasma was luminiscent with a cloudy-green color, E-bright brick red. In the plasma, green cell fragments were swimming. With the beginning of regeneration the amount of red cells, i.e., those containing RNA in the nucleus again increased. In patients in the clinic, after 30 minutes - 1 hour after the first dose of irradiation, with a normal initial blood picture, a great amount of leucocytes with bright orange or red

Card 2/3

KLIMENTKO, A. I.A.

Prognostic significance of the blood picture in malignant tumors
during the process of radiation therapy. Med. rad. no. 4:43-47
'62. (MIRA 15:6)

1. Iz radiologicheskogo otdela (zav. - prof. A. V. Koslova)
Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiolo-
gicheskogo instituta Ministerstva zdravookhraneniya RSFSR.

(BLOOD—EXAMINATION) (CANCER) (RADIOTHERAPY)

MERKOVA, M.A.; OMEL'YANENKO, L.M.; KLIMENKO, A.A.

Possibilities of gamma-therapy of pituitary tumors. Med. rad. 8
no. 5:17-20 My '63. (MIRA 17:5)

1. Iz kafedry klinicheskoy radiologii (zav. - prof. A.V. Kozirova)
"entral'nogo instituta usovershenstvovaniya vrachey i radiologicheskogo
otdela (rukoveditel' - prof. A.V. Kozirova) Nauchno-issledovatel'skogo
rentgeno-radiologicheskogo instituta.

KLIMENKO, A.A.

Leucopenia in radiotherapy. Med. rad. & no. 6:3-7 Ju '63.
(MIRA 1784)

1. Iz radiologicheskogo otdela (zav. - prof. A.V. Kozlova)
Nauchno-issledovatel'skogo res geno-radiologicheskogo instituta
Ministerstva zdravookhraneniya RSFSR.

SENCELI, O.S. (Moskva); KLYMENKO, A.A. (Moskva); POLITOVA, Ye.N. (Moskva)

Elements of atypical tissue in marrow punctate of patients with
some malignant diseases. Trudy TSentr. rukoch.-issl. iatet. rentg.
1 rad. 11 no. 1:53-59 '64. (MIRA 12:11)

LONOVIN, N.L.; KLIMENKO, A.B.; YERMOLENKO, I.N.

Electrochromatographic separation of amino acids using ion exchange
analytic paper made of oxidized cellulose. Vestsi AN BSSR. Ser. fiz.-
tekhn. nav. no.2:136-137 '64. (MIRA 18:1)

KILDEENKO, A.G.

Foreign body in the sphenoid sinus. Vest. oto-rin. 16 no.6:71-72
N-D '54.

(MLRA 8:1)

1. Is ushnoe otdeleniya (zav.-dotsent V.S.Landa) Yaroslavskoy oblastnoy klinicheskoy bol'nitnyy,
(PARANASAL SINUSES, foreign bodies
metal splinter, surg. removal)
(FOREIGN BODIES
nasal sinus, metal splinter, surg. removal)

KLIMENKO, A.G.

USSR/Pharmacology, Toxicology. Analeptics

U-3

Abs Jour : Ref Zhur - Biol., No 4, 1958, No 17559

Author : Strakhova M.P., Klimenko A.G.

Inst : The Tomsk Medical Institute

Title : The Influence of Bromo-Caffeine Therapy in Rheumatism on
the Condition of the Fundamental Nervous Processes.

Orig Pub : 5-1 Pavlovsk. sb. Tomskii med. in-t. Tomsk. Un-t, 1956, 203-206

Abstract : Observations were carried out on young rheumatic patients with clearly defined inflammatory changes of the joints. The investigation of the patients was by the plethysmographic method in a specially equipped room with the use of a variety of stimulants (cold, heat, light). Bromine was administered intravenously as a 10% solution in 10 ml doses, caffeine in 0.5 g doses 3 times daily for 10 days. In some patients of medium weight the fundamental nerve processes in the brain cortex became normal within 6-8 days. In more severe cases of acute rheumatic polyarthritis bromo-caffeine therapy did not lead to the reestablishment of the disturbed cortical processes; in these forms of rheumatism the bromo-caffeine therapy has to be carried out in combination with salicylates.

Card : 1/1

KLIMENKO, A.G.

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Cand Med Sci - (diss) "Change in the upper nervous activity in patients with rheumatism when treated with cortisone and ACTH." Tomsk, 1961. 11 pp; (Novosibirsk State Med Inst); 250 copies; price not given; (KL. 10-61 sup, 224)

KLIMENKO, A.G.

Four-probe microhead for measuring the specific resistance
of single-crystal films. Prib. i tekhn. eksp. 8 no.5:222-223
S-O '63. (MIRA 16:12)

1. Khar'kovskiy gosudarstvennyy universitet.

KLIMENKO, A.I.

Some data on the histone - DNA ratio in the nuclei of
liver cells of young and aged rats. Biokhimia 29
no.5:820-823 J1-Ag '64. (MIRA 18:11)

1. Katedra fisiologii cheloveka i zhivotnykh biologicheskogo
fakul'teta Gosudarstvennogo universiteta imeni Gor'kogo,
Khar'kov.

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

Engr., AmurStal' Factory, -cl94b-

"Prevention of the formation of hollows on the surfaces of steel plates," Stal', No. 9, 1948

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

Card
KLIMENKO, A. K.: Master Tech Sci (diss) -- "Investigation of the process of removing the connecting-rod bushings of tractor engines with a regulated roller remover". Moscow, 1958. 22 pp (Joint Scientific Council, All-Union Sci Res Inst of Mechanization of Agric VIM and All-Union Sci Res Inst of the Electrification of Agric VIESKh), 150 copies (KL, No 5, 1959, 150)

KLDONKO, A.K., insh.

Finishing bronze bearings by rolling. Makh. i elek. sets. sel'khoz.
15 no.1:25-28 '58. (MIRA 11:3).

1. Gosudarstvennyy sovusnyy nauchno-issledovatel'skiy tekhnologicheskiy institut remonta i eksploatatsii traktorov i sel'skokhozyaystvennykh mashin.
(Rolling (Metalwork)) (Bearings (Machinery))

VASILISIOV, P.A., inzhener; GOTLIV, Ya.L., inzhener; ZAYMIN, Ye.Ye., inzhener;
SMOLIN, N.I., inzhener; KLINIKHED, A.K., inzhener.

Study of water accumulated under snow and calculation of maximum accumulations in planning hydroelectric power stations. Gidr.stroi.25 no.3:
37-39 Ap '56. (MIRA 919)
(Hydroelectric power stations) (Hydrology)

L 36359-66 ENT(1)
ACC NR: AP6005295

SOURCE CODE: UR/0413/66/000/001/0035/0036

50
B

INVENTOR: Klimenko, A. K.

ORG: none

TITLE: D-c amplifier for a servo drive. Class 21, No. 177462

SOURCE: Izobreteniya, promyshlennyye obraztay, tovarnyye znaki, no. 1, 1966, 35-36

TOPIC TAGS: generator, current amplifier, signal frequency, servo drive, AFC, electronic feedback

ABSTRACT: An Author Certificate has been issued describing a d-c amplifier for a servo drive operating on the principle of automatic phase frequency control. It is set into operation by two generators controlled by the frequency of signals received from an amplified signal and a feedback signal from the output of the phase discriminator, for which the potential trigger is used. To increase circuit stability and saturate the amplifier curve beyond the linear operating sector, a correcting circuit consisting of an electric valve for the memory stage and of the inhibit stage, is included between the output

Card 1/2

UDC: 621.375.5

"APPROVED FOR RELEASE: 09/18/2001

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L 36359-66

ACC NR: AP6005295

of each generator and the input of the discriminator.

[NT]

SUB CODE: 09 / SUBM DATE: 01Jun64

nr
Card 2/2

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

RAVITSKAYA, T.M.; KAZARNOVSKIY, D.S.; Prinimali uchastiyet KLIMENKO, A.N.; FADEYEVA, A.M.

Mechanism of the formation of defects of contact origin
in rail heads. Sbor. trud. UNTIM no.11:324-333 '65.
(MIR, 18:11)

SHILINA, Z.A.; STANKEVICH, R.S.; KLIMENKO, A.P.

Photoelectric apparatus for measuring the number of capron mono-filaments. Khim.volok. no.6:48-49 '61. (MIRA 14:12)

1. Institut avtomatiki Gosplana USSR.
(Nylon)

KLIMENKO, Aleksandr Petrovich; PETRUSHENKO, Aleksandr Antonovich; VASENTSOV,
Iurii Andreyevich; VYSOTSKIY, Grigoriy Ivanovich; CHEGLIKOV, A.G.,
otv.red.; REMENNIK, T.K., red.izd-va; RAKHLINA, N.P., tekhn.red.

[Thermodynamic properties of light hydrocarbons of the paraffin
series] Termodynamicheskie svoistva legkikh uglevodorodov parafinovogo
riada. Kyiv, Izd-vo Akad.nauk Ukrainskoj SSR, 1960. 95 p. (Akademiia
nauk URSR, Kiev. Instytut vyuzytannia gazu. Trudy, no.8).
(MIRA 14:12)

(Hydrocarbons--Analysis)

L 382.7-65 EWT(m)/EWP(q)/EWP(b) SSD/ASD(s)-5/AFWL/RAEM(c)/ESD(c)/ESD(gs)/
ESD(dp)/ESD(t)/RAEM(t) JD/JG

S/0185/64/009/007/0733/0743 K

ACCESSION NRI AP4043094

AUTHOR: Klymenko, A. P. (Klymenko, A. P.); Tkhoryak, Yu. O. (Tkhorki,
Yu. O.)

TITLE: Investigation of recombination in nickel atoms in p-germanium
at high injection levels

SOURCE: Ukrayins'kyi fizichnyi zhurnal, v. 9, no. 7, 1964, 733-
743

TOPIC TAGS: injection level, current carrier recombination, current
carrier lifetime, diode saturation current, Germanium, nickel, nickel
impurity concentration, semiconductor, semiconductor device, semicon-
ductor diode

ABSTRACT: The dependence of the lifetime τ of current carriers in p-
Ge diodes doped with Ni on the injection level and the temperature
has been investigated. It was found that in diodes the dependence of
 τ on temperature is weaker than in massive specimens because of the
influence of a surface recombination whose efficiency increases with

Card 1/2

L 8827-65

ACCESSION NR: AP4043094

cooling. The theoretical and observed dependence of τ on the injection level agree qualitatively. The pulse method for measuring τ has been theoretically analyzed. The calculations show that the pulse method provides accurate values for τ_p and τ_n at vanishing small and superhigh injection levels. To reduce the errors in the region of medium injection levels, the parameter has to be increased for the measuring circuit I_2/I_1 , where I_1 is the amplitude of the forward current, and I_2 is the amplitude of the reverse current after switching off the diode. As an example, a calculation was made of the dependence of the injection level on the current density at the p-n junction in p-Ge with a concentration of $3 \times 10^{15} \text{ cm}^{-3}$ of Ni at 296K, 235K, and 185K. Orig. art. Has: 6 figures and 44 formulas.

ASSOCIATION: Institut poluprovodnikov AN URSR, Kiev, (Institute of Semiconductors, AN URSR)

SUBMITTED: 05Aug63

ATD PRESS: 3106

ENCL: 00

SUB CODE: EC

NO REF Sov: 016

OTHERS: 010

Card 2/2

KIJMENKO, A.P. [Klymenko, A.P.]; TKHORIK, Yu.A. [Tkhoryk, Yu.O.]

Effect of the duration of the pulse front on direct transients
in semiconductor diodes. Ukr. fiz. zhur. 9 no.11:1271-1273 N '64
(MIRA 18:1)

1. Institut poluprovodnikov AN UkrSSR, Kiev.

KLIMENKO, A.P. [Klymenko, A.P.; TKhORIK, Yu.A. (Tkhorik, Yu.O.)

Use of the simultaneous diffusion of two admixtures in manufacturing quick-response diodes. Ukr. fiz. zhur. 10 no.2:238-239 F '65. (MIRA 18:4)

I. Institut poluprovodnikov AN UkrSSR, Kiev.

KLINEKO, A. P.

"Thermodynamic Analysis and Experimental Investigation of an Expander Machine in the Treatment and Refining of Natural Gas." Cand Tech Sci, All-Union Petroleum Gas Sci Res Inst, Min Petroleum Industry, Moscow, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

GALIENKO, N.P.; KLIMENTKO, A.P.

Selecting and studying bentonites for methane storage by the
sorption method. Bent. gliny Ukr. no.1:74-85 '55.
(MIRA 12:12)

1. Institut ispol'zovaniya gaza AN USSR.
(Bentonite) (Methane---Storage)

SOV/124-58-11-12759

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 118 (USSR)

AUTHOR: Klimenko, A. P.

TITLE: The General Thermodynamic Analysis of the Cycle of a Compressed-gas Driven Engine (Obshchiy termodinamicheskiy analiz raboty detandera)

PERIODICAL: Tr. In-t ispol'zovaniya gaza v kommun. kh-ve i prom-sti AN UkrSSR, 1956, book 4, pp 6-9

ABSTRACT: The operating cycle of a compressed-gas driven engine is evaluated in terms of its cooling coefficient, which comprises the relative quantity of cold received therein and its potential. Using the thermodynamic relationships the author examines the influence of the parameters of the gas in the cycle on the adiabatic cooling coefficient ϕ of a compressed-gas driven engine operating on an ideal gas. An analysis of the equation for ϕ shows that ϕ increases with increasing expansion. Precooling augments ϕ .

V. A. Bashkin

Card 1/1

KLIMONKO, A.P.

Problems on the theory of the piston expander. Trudy Inst. isp. gaza
AN URSR no. 4-10-28 '56.
(MIRA 10:12)
(Refrigeration and refrigerating machinery)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENKO, N.V.

KLIMENKO, A.P.

Analytical investigation of the operating cycle of an actual
expander. Trudy Inst. isp. gaza AM Ukr no. 4:29-58 '56. (MIRA 10:12)
(Refrigeration and refrigerating machinery)
(Thermodynamics)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

KLIMENKO, A.P.

Gas-burning and automatic devices in absorption, gas refrigerators. Truly Inst.isp.gaza AM USSR no.6:91-95 '58.

(MIRA 12:8)

(Gas appliances)

(Refrigerators)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

~~KLIMENKO, A. P.~~

KLIMENKO, A. P.
"One Flow Cascade Cycle (in Schemes of Natural Gas Liquefaction and
Gas Separation)."

Report submitted for the 10th Intl. Refrigeration Congress, Copenhagen,
19 August - 2 September 1959.

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENKO, A.P.

1 2 3 4 5 6

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

11(2)

PHASE I BOOK EXPLOITATION SOV/329;

Klimenko, Aleksandr Petrovich

Zhidkiye uglevodородные газы; хранение, транспорт, регазификация и
использование жидких газов (Liquid Hydrocarbon Gases: Storage,
Transportation, Regasification and Utilization of Liquid Gases) Moscow,
Gostoptekhnizdat, 1959. 294 p. 3,200 copies printed.

Exec. Ed.: M. P. Martynova; Tech. Ed.: A. S. Polosina.

PURPOSE: This manual is intended for engineers and technicians concerned with
the storage, transportation, utilization, and regasification of liquefied
cracking gases, and also for technical personnel engaged in designing, assembling
and controlling equipment used in these operations.

COVERAGE: The manual reviews problems connected with the storage, transportation,
regasification and utilization of liquefied cracking gases. Composition of
natural and cracking gases serving as crude stock for liquid-gas production
is analyzed. Properties of various liquid gases are reviewed and methods of
extracting ethane and ethylene from natural and cracking gases are described
and flow sheets of units used for the processes are presented. Storage and

Card 145

Liquid Hydrocarbon Gases (Cont.)

SOV/3291

transportation of LP gas is outlined, and various types of storage tanks, tank cars, and tank trucks with their safety equipment and controlling instruments are described and illustrated. Methods of erecting storage tanks and of filling them and various other gas containers are discussed and liquid-gas filling stations and their equipment are described. Principles of regasification of liquefied gases are reviewed and units used in the process described. Utilization of liquid gas for industrial, agricultural and other purposes is discussed. The manual contains numerous designs of the equipment reviewed, graphs, computations, tables and flow sheets. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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Ch. I. Physical and Thermodynamic Properties of LP Gases	6
Properties of individual hydrocarbons (components of liquid gas)	6
Properties of gas mixtures	20
Testing LP gases	27
Ch. II. Production of LP Gas	30
Crude stock	30
Card 7-5	

~~KUZNETSOV, A.P.; VASNETSOV, Yu.A.~~

Enrichment of generator gas by a propane-butane mixture. Gas-prom.
S no. 9:18-20 8 '60. (MIRA 13:9)
(Gas as fuel) (Propane) (Butane)

KLIMENTKO, A. P., KANEVETS, O. E., GAYDUK, B. V., and
CHERNOBYL', E. I.

"More Accurate Design of Heat Exchangers."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

KLIMENKO A. P.

KANEVETS, G. N., GAYDUK, D. V. and CHERNOBYL'SKAYA E. I.

"Calculation Method of the Optimum Heat Exchangers by
Electron Computers."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

KLIMENKO, Aleksandr Petrovich; BYSTROVA, T.A., red.; LUK'YANOV, P.I.,
red.; YEFREMova, T.D., red. red.; BASHMAKOV, G.M., tekhn. red.

[Production of ethylene from petroleum and gases] Poluchenie etilena
na is nefti i gaza. Moskva, Gostoptekhizdat, 1962. 234 p.
(MIRA 15:7)

(Ethylene) (Petroleum—Refining)

KLIMENKO, Aleksandr Petrovich; RABINOVICH, Ye.Z., vedushchiy red.;
VOROMOVA, V.V., tekhn.red.

[Liquefied hydrocarbon gases; storage, transportation,
regasification, and utilization] Szhizhennye uglevodordnye
gazy; khranenie, transport, regazifikatsiya i ispol'zovanie.
Issled., perer. i dop. Moskva, Gostoptekhnidat, 1962, 419 p.
(MIRA 15:5)

(Liquefied petroleum gas)

PHASE I BOOK EXPLOITATION

SOV/6089

Klimenko, Aleksandr Petrovich

Poluchenije etilena iz nefti i gaza (Extraction of Ethylene From Petroleum and Gas). Moscow, Gostoptekhizdat, 1962. 234 p. 4250 copies printed.

Eds.: T. A. Bystrova and P. I. Luk'yanov; Chief Ed.: T. D. Yefremova;
Tech. Ed.: G. M. Bashmakov.

PURPOSE: This book is intended for technical personnel in the petroleum, gas, and chemical industries engaged in the production and use of ethylene and in planning and setting up of plants. It can also be used by students specializing in heavy organic synthesis.

COVERAGE: The book deals with ethylene production from petroleum and gas, giving detailed information on the sources and properties of the raw material. The industrial processes and the equipment used in ethylene production by pyrolysis, catalytic hydrogenation of acetylene, and dehydration of ethyl

Card 1/3

Extraction of Ethylene (Cont.)

SOV/6089

alcohol, as well as extraction of ethylene from coke-oven and refinery gas, are described. Separation of ethylene from the gaseous mixtures and its purification are discussed in detail. Included are data on the chemical processing of ethylene by polymerization, oxidation, chlorination, hydrochlorination, oxo process, hydration, telomerization, and alkylation. The use of ethylene in the manufacture of plastics and synthetic materials is noted. No personalities are mentioned. There are 122 references: 67 English, 48 Soviet, 5 German, and 2 French.

TABLE OF CONTENTS (Abridged):

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APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

SOV/6089

Ch. IV. Separation of Ethylene 90**References** 233**AVAILABLE:** Library of Congress**SUBJECT:** Chemical Engineering
Petroleum and Gas Industries

Card 3/3

BN/pw/os
11/5/82

KLIMENKO, A.P.; MOGIL'NYI, V.I.

Adsorption drying of gas with heat exchange at low temperatures
of contact. Trudy Inst. i sp. gaza AN USSR 9:5-9 '61. (MIRA 15:9)
(Adsorption)

"APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0

KLIMENKO, A.P.

Compression-sorption cycle of mean temperature refrigeration.
Trudy Inst.isp.gaza AM USSR 9:35-⁶⁰ '61. (MIRA 15:9)
(Refrigeration and refrigerating machinery)

APPROVED FOR RELEASE: 09/18/2001

CIA-RDP86-00513R000723110016-0"

KLIMENKO, A.P.; SEL'YANOVA, G.N.

Solubility of carbon dioxide in liquefied hydrocarbons. Trudy
Inst.isp.gaza AM USSR 9:10-12 '61. (MIRA 15:9)
(Liquefied gases) (Carbon dioxide)

KLIMENKO, A.P.

Liquefaction of methane, its transportation and storage.
Trudy Inst.isp.gaza AM USSR 9:44-50 '61. (MIRA 15:9)
(Methane—Storage) (Gases—Liquefaction)

KLIMENKO, A.P.

Experimental investigation of piston expander. Trudy Inst.isp.gaza
AN USSR 9:56-74 '61. (MIRA 15:9)
(Refrigeration and refrigerating machinery)

KLIMENKO, A.P.; VASKE~~NOV~~, Yu.A.

Rectification of the propane-propylene fraction in a
centrifugal rectifier with a spiral rotor. Trudy Inst.
isp.gaza AN USSR 9:83-89 '61. (MIRA 15:9)
(Petroleum—Refining)
(Propene) (Propane)

KLIMENTKO, A.P.; STEPANOV, A.V.; VEKSHTEIN, L.M.

Using the pressure drop of natural gas. Trudy Inst.isp.gaza
AN USSR 9:97-102 '61. (MIRA 15:9)
(Gas, Natural) (Steam turbines)

KLIMENKO, A.P.; KANEVETS, G.Ye.; GAYDUK, B.V.

Production of energy in the heat consumption of casing-head
gasoline plants. Trudy Inst.isp.gaza AN USSR 9:103-108
'61. (MIRA 15:9)

(Gasoline) (Heat engineering)

KLIMENKO, A.P.; KAMEVETS, O.Ye.; GAYDUK, B.V.; CHERNOBEL'SKAYA, E.I.

Designing optimum heat exchange units with the aid of electronic calculating machines. Trudy Inst. i sp. gaza AM USSR 9:111-118 '61.
(MIRA 15:9)

(Heat exchangers)

RUDNYY, N.M., kand.tehn.nauk; BOGOMOLOV, G.Ya.; KOLOMIETS, A.R.;
KLIMENKO, A.P.; LIPOVETSKAYA, G.I.; RAZINOV, A.I.

Acoustic pickup of the presence of a flow of fluid viscous
and powdery materials. Avtom.i prib. no.3:55-58 Jl-S '62.
(MIRA 16:2)

1. Institut avtomatiki Gosplanu UkrSSR.
(Flowmeters)

S/066/63/000/001/002/002

AUTHOR: Aerov, M. E., Doctor of Technical Sciences, Bystrova, T. A., Candidate of Technical Sciences, and Zalentsova, N. I., Engineer; Klimenko, A. P., Candidate of Technical Sciences, Cheglikov, A. G., Candidate of Technical Sciences, and Kostyuk, V. I., Engineer

TITLE: An experimental study of contact heat exchange

PERIODICAL: Kholodil'naya tekhnika, no. 1, 1963, 37-40

TEXT: To study contact heat exchange, the authors investigated packed evaporators and condensers and developed apparatus which used these devices. The systems studied were: an aqueous solution of calcium chloride - boiling propane and an aqueous solution of calcium chloride-boiling butane. The basic part of the apparatus was a contact evaporator which was a scrubber filled with ceramic packing of 17 x 17 x 4 mm Raschig rings. The temperature difference in the apparatus was 1-3°. Values of the heat transfer coefficient, 3,000 to 10,000 kcal/m² per hour, obtained here in the upper zone of the evaporator were lower than those obtained in industrial foaming apparatus, due to lower steam velocities.

Contact heat exchange in condensers was also proposed to improve effectiveness of refrigeration equipment. This scheme permitted elimination of tube heat exchangers

Card 1 of 2

S/066/63/000/001/002/002

An experimental study ...

and replacement of ammonia by propane at about 1/9 the cost. Compressed propane was delivered to the lower part of a contact condenser and forced upward against a flow of cooling water. The condensate and water passed into the lower part of the condenser where the phases were separated. The use of propane increased the cooling capacity. The equilibrium concentration of propane in water under ordinary working conditions (pressure of 11 to 12 atm, temperature of 30°) was 0.5×10^{-3} kg per kg of water. Losses of propane from water in the aqueous condensate were about 5×10^{-3} kg per kg of circulating propane. Equilibrium concentration of water in liquid propane was 0.14×10^{-3} kg/kg. Two figures and one table were given. English language references: L. Garwin and B. D. Smith, Chem. Engng Progress, 1953, no. 11; T. Woodward, Ibid., 1961, no. 1; G. Karnofsky, Ibid., 1961, no. 1; W. G. Knox, T. Hess, Ibid., 1961, no. 2; W. F. Hoot, Petrol. Refiner, vol. 30, no. 5, 1961, D. S. Davis, Chem. and Process Engng., 1960, vol. 41, no. 2.

ASSOCIATIONS: Nauchno-issledovatel'skiy institut sinteticheskikh spiritor i organicheskikh produktov (Scientific Research Institute for Synthetic Alcohols and Organic Products) (Aerov, M. E.; Bystrova, T. A.; Zelentsova, N. I.); Institut ispol'zovaniya gaza AN UkrSSR (Institute for the Utilization of Gas, AS, UkrSSR) (Cheglikov, A. G.; Klimenko, A. P.; Kostynuk, V. I.)

Card 2 of 2

SKLYAR, Vladimir Tikhonovich, kand. khim. nauk; IZBEEV, Yevgraf
Venedikovich, kand. khim. nauk; ZAKUPRA, Vadim
Aleksandrovich, kand. tekhn. nauk; KLYMENKO, A.P., kand.
tekhn. nauk, rezensent

[Higher monolefins] Vysshie monolefiny. Kyiv, Tekhnika,
1964. 281 p. (NIRK 17:9)

KLIMENKO, Aleksandr Petrovich, kand. tekhn. nauk; ZAKUPRA, V.A.,
kand. khim. nauk, ratsenzernt

[Separation of natural hydrocarbon gases] Razdelenie pri-
rodnykh uglevodorodnykh gasov. Kiev, Tekhnika, 1964. 379 p.
(MIRA 17:11)

GUTYRYA, V.S., glav. red.; KLIMENKO, A.P., zam. glav. red.; GALICH,
P.N., red.; KAMARIN, N.M., red.; MAN'KOVSKAYA, N.K., red.;
MASOMYAN, V.Ya., red.; SERDYUK, O.P., red.

[Petroleum chemistry; paraffin petroleum hydrocarbons]
Neftekhimiia; parafinovye uglevodorody nefti, ikh vydelenie
i pererabotka. Kiev, Naukova dumka, 1964. 138 p.
(MIRA 17:10)
1. Akademiya nauk URSR, Kiev. Institut khimii vysokomole-
kulyarnykh soyedineniy.

KLIMENKO, A.P.; VYSOTSKIY, G.I.

Reserves for increasing the production of liquefied gases in
petroleum refineries. Neft. i gas. prom. no.1:41-42 Ja-Mr '64.
(MIRA 18:2)

L 36952-66 EWT(n) IJP(e) JAJ

ACC NR. AT6017661

(N)

SOURCE CODE: UR/3162/65/000/002/0180/0183

AUTHOR: Klimenko, A. P. (Engineer); Rudnyy, N. M. (Candidate of technical sciences)

ORG: none

TITLE: Photoelectric device with a modulated light source for measuring flow of viscous liquids

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya. Khimicheskoye mashinostroyeniye, no. 2, 1965. Protsessy, mashiny, apparaty i avtomatizatsiya khimicheskikh proizvodstv (Processes, machines, apparatus and automation of chemical plants), 180-183

TOPIC TAGS: flow measurement, measuring device, flow meter, viscous flow

ABSTRACT: The device (based on a 5w TM-03 neon tube and an ac power source) was developed in view of the fact that the sensing elements of contact-type devices either wear out or become fouled. The important feature of this neon lamp is that it is used as a light source modulation and also as a compensator of light source. By correctly selecting a balance resistor, connected in series with this tube, the voltage across the lamp electrodes and the magnitude of the light source remain stable in the face of voltage source fluctuation over a broad range. A schematic diagram of the photoelectric device is shown and the functions of each electronic component and the neon lamp is ex-

Card 1/2

Card 2/2 All

L 36953-66 EWT(m)/T/EWP(j) IJP(c) RM
ACC NR: AT6017662

SOURCE CODE: UR/3162/65/000/002/0184/0189

AUTHOR: Rudnyy, N. N. (Candidate of technical sciences); Klinenko, A. P. (Engineer)

ORG: none

TITLE: Photoselectric device for measuring thickness fluctuations in caprone fibers

SOURCE: Ukraine. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya. Khimi-
cheskoye mashinostroyeniye, no. 2, 1965. Protsessy, mashiny, apparaty i avtomatizatsiya
khimicheskikh proizvodstv (Processes, machines, apparatus and automation of chemical
plants), 184-189

TOPIC TAGS: photoelectric method, photoelectric cell, measuring apparatus

ABSTRACT: The device (model ATM-1) is based on light reflected by the illuminated caprone fiber. The reflection is fed to the input of the photoelectric cell. Tests showed that the output current of the photoelectric device modulated by the reflecting light was directly proportional to the thickness of the fiber. A graph shows that the relationship between the photocurrent and the thread thickness is linear. A wiring diagram of the device is given. Light intensity and temperature of the measuring device are compensated by a differential detection method. The advantage of this method over existing methods is that it measures the diameter of the fiber instead of its mass.
Orig. art. has: 5 figures.

SUB CODE: 09 11/ SUBM DATE: none

Card 1/1 All

L 04209-67 EWT(d) IJP(o)

ACC NR: AR6000712

SOURCE CODE: UR/0124/65/000/009/B087/B087

AUTHORS: Kanovets, G. Ya., Klimenko, A. P.52
BTITLE: The interval-iteration method for the design of heat exchangers by electronic computers

SOURCE: Ref. zh. Mekhanika, Abs. 9B589

REF SOURCE: Sb. Resp. nauchno-tekhn. konferentsiya po kompleksn. ispol's. tepla i topliva v prom-sti, B. m., Kiyevsk. un-t, 1964, 281-288

TOPIC TAGS: iteration, heat exchanger, computer application, computer calculation

ABSTRACT: In designing heat exchangers, the use of calculation methods with averaged thermodynamic properties of the coolant leads to large errors in determining the surface of the apparatus. Interval methods for determining the surface sharply reduce the error in the calculation. Because the tubular casing equipment of a combined flow is most commonly used in different engineering systems in which the flows of the materials undergo significant temperature changes, discussion of the paper on the interval-iteration method developed by the authors is presented. The method is investigated using, as an example, the design of a combined flow heat exchanger: one path between the tubes, the second path in the tubes. It is pointed out that the method permits the calculation of the heat transfer with any degree of

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L 04209-67

ACC NR: AR6000712

Precision previously established and extends to equipment along the surfaces of which the physical properties of the coolant are changed according to any principle. Because of the time-consuming nature of the method, it can be effectively used only when conducting the calculations on electronic digital computers. The method can be used in design organizations with hand calculation of the most important and of mass produced heat exchangers. M. L. Z. *(Translation of abstract)*

SUB CODE: 13,09

Card 2/2 do

ACC NR: A15036497

SCTB DD/DD

SOURCE CODE: UR/0000/66/000/000/0063/0064

AUTHOR: Benevolinskaya, V. N.; Drushinin, Yu. P.; Klimenko, A. S.; Malyutina, T. S.; Sychkov, I. A.

ORG: none

TITLE: The effect of gamma irradiation and irradiation with protons with energies of 600 to 127 Mev on the radiosensitivity of yeast cells [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966] SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 63-64. 32

TOPIC TAGS: cosmic radiation biologic effect, proton radiation biologic effect, ionizing radiation biologic effect, relative biologic efficiency, life support system, space food, radiation induced mutation, yeast

ABSTRACT: Yeast cells are a convenient object for space research because, in addition to serving as a model system, they may someday be used as a heterotrophic link in a spaceflight life-support system. The vulnerability of the cell division process in yeast cells irradiated in the quiescent state was studied. A water suspension of yeast was irradiated with 660-, 510-, 240- and 127-Mev protons from an OIYAI synchrocyclotron, and their RBE was determined in comparison with Co⁶⁰ gamma rays (from an ECO-4 apparatus). Irradiation with 660-Mev protons was conducted through a polyethylene and lead filter. The activation method of dosimetry was used for 660-Mev protons, and the luminescent method for lower-energy pro-

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ACC NR: AT6036497

tons. Ionization chambers were used to monitor the flux. Experiments were conducted with diploid *Saccharomyces vini* yeast cells (McGri 130-13 strain) and haploid *Saccharomyces cerevisiae* yeast cells (strain 40-2587). Most of the studies were conducted with 600-Mev protons and the diploid strain. The following tests of yeast radiosensitivity were used: 1) inactivation of macrocolonies and of different types of microcolonies, 2) disruption of the cell division rate in the first five cycles after the beginning of irradiation, 3) dispersion of different types of microcolonies, 4) post-radiation recovery, and 5) lysis of cells. Dose-damage relationships in a range from 1-120 rad were established for each index. Experimental results indicate that the effect of proton irradiation is essentially the same as gamma irradiation; thus the RBE for protons in these experiments was close to one. Evaluation of these data considering the different linear energy losses of the types of radiation used made possible a preliminary estimate of the radiosensitivity of quiescent yeast cells in spaceflight conditions. This is necessary as yeast may be used as a back-up system for spaceflight life support, if the system of continuous cultivation of heterotrophs stops working. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2 egk

ACC NR: AP6034196

SOURCE CODE: UR/0369/66/002/005/0552/0555

AUTHOR: Fedorchenko, I. M.; Pilatova, N. A.; Klimenko, A. V.; Afanas'yev, V. F.; Polushko, A. P.

ORG: Institute of the Science of Materials, AN UkrSSR, Kiev (Institut problem materialovedeniya AN UkrSSR)

TITLE: Antifriction properties of iron based powder metallurgy products in dry friction

SOURCE: Fiziko-khimicheskaya mehanika materialov, v. 2, no. 5, 1966, 552-555

TOPIC/TACS: dry friction, antifriction material, powder metallurgy, iron base alloy, iron powder, friction coefficient

ABSTRACT: A study has been made of the antifriction properties of iron based powder metallurgy products in dry friction. The antifriction materials were prepared from PZhIMI reduced iron powder with such additives as PM2 reduced copper powder zinc sulfide powder and/or KLS graphite powder (GOST's 5279-62, 4960-4, 3657-54, and 5279-61, respectively). The other member of the friction couple was a steel roller (steels 45 or 40X, or 1X18N9T nitrided steel). The experiments were conducted on the MI-1M friction machine at a constant speed of 0.9 m/sec. Addition of copper powder or zinc sulfide to the iron-graphite-base increased the load at the onset of seizure from 5 to 50-60 kg/cm², stabilized the friction process, and lowered the friction coefficient by 500-600%. Study of the friction surface with a UV microscope showed that the increase of wear resistance and the lowering of the friction

Cord 1/2